Statement of Work
Remedial Design/Remedial Action Oversight

Fibers Public Supply Wells Site
Guayama, Puerto Rico

Background

The Fibers Public Supply Wells Site ("Site") is located along Route 3 in Guayama, Puerto Rico. The area of investigation encompasses about 540 acres, and includes a former synthetic fibers manufacturing plant which is presently occupied by Ayerst-Wyeth Pharmaceutical,Inc., five public - supply wells owned and operated by the Puerto Rico Aqueduct and Sewer Authority (PRASA), the Anaquest Caribe, Inc. facility and adjacent areas.

The groundwater quality of the aquifer underlying and downgradient of the site was assessed throughout the Remedial Investigation by three rounds of groundwater samples during the period of 1987 to 1990. The following halogenated alkane/alkene as well as haloether substances which belong to Anaquest Co. are hazardous substances pursuant to CERCLA and are also the principal organic contaminants detected during the RI groundwater monitoring program.

- Tetrachloroethane
- Trichloroethene
- 1,2-Dichloroethene
- Vinyl Chloride
- 1,1,2,2-Tetrachloroethane
- Carbon Tetrachloride
- Trichlorofluoromethane
- Isoflurane and Enflurane - (Haloethers)

In addition, soil samples were collected during the RI Soil investigation as well as during a separate investigation conducted by American Home Product (AHP) in an area known as the Soil Disposal Area (SDA). The AHP Modified Remedial Investigation revealed that the SDA contain asbestos containing materials, chromium, cadmium, and PCB (maximum concentration = 1.7 ppm).

The groundwater and the SDA activities are not related and required different types of predesign, Remedial Design and Remedial Action Activities and schedules. In order to allow the groundwater and SDA work to be accomplished as separate activities, the work has been divided in the following two parts:

- Part I - Groundwater
- Part II - SDA

Part I - Groundwater Remedy

The groundwater work shall include, without limitation:

1. Design and construction of an air stripping system capable of meeting drinking water standards (MCLs and PRMCLs).

2. Additional characterization of the haloether plume.

3. Determination of the best locations for extraction wells, including evaluation of the use of existing PRASA wells.

4. Determination of the most appropriate handling procedure for the treated water if a better option than the presently preferred option of discharge to the irrigation canal is identified.

5. Limited evaluation of existing well capture zones to assure that an adequate vertical zone of the aquifer will be affected by remediation pumping.

6. Evaluation of the contaminant collection rate for well location and number, pumping patterns, rates, and pump/pulse sequences.

7. Selection of the optimal pumping system for collecting the contaminants of concern within a reasonable period, without removing unnecessary volumes of clean water from the aquifer and treating and handling more water than is required to achieve the goal and objectives.

8. Installation of a sufficient number of chloride monitoring wells at appropriate locations to monitor potential saltwater encroachment.

9. Implementation of a long-term monitoring program to track the migration and concentrations of the contaminants of concern and to assess the performance of the groundwater extraction wells.

10. Implementation of a system monitoring program which includes the collection and periodic analysis of influents and effluents from the air stripping system and periodic collection of wellhead samples, at intervals determined during preparation of the Groundwater Remedial Action O&M Plan.

11. Determination and coordination of groundwater use restrictions which should be implemented during the Groundwater Remedial Action.

12. Incorporation of the applicable or relevant and appropriate requirements identified in the ROD.

13. A description of the methods by which Settling Defendants will determine compliance with Performance Standards found in the ROD and the Consent Decree.

Part II - Soil Disposal Area Remedy

The SDA work shall include, without limitation:

1. Characterization, excavation, and disposal of soils and/or materials containing greater than 1 percent asbestos from the SDA to an appropriate landfill.

2. Dust control and worker health and safety measures throughout the excavation process.

3. Implementation of preventive measures to protect the surrounding communities during the transportation of materials removed from the site along the route to the appropriate landfill.

4. Incorporation of the applicable or relevant and appropriate requirements identified in the ROD.

5. A description of the methods by which Settling Defendants will determine compliance with Performance Standards found in the ROD and the Consent Decree.

Objective of RD/RA Oversight

The objective of this oversight project is to ensure that the remedial actions, as designed, are protective of human health and the environment, comply with all applicable or relevant and appropriate laws, regulations, and requirements, have met all performance standards specified in the ROD, and are consistent with the site remedies. The purpose of this Work Assignment is to have the contractor provide technical review of documents submitted by the PRPs or the PRPs' contractor and perform field oversight activities, as part of the Remedial Design and Remedial Action (RD/RA) for the site remedies.

As such, contractor oversight services are sought to assist the EPA Work Assignment Manager (EPA WAM) in ensuring the technical quality of the design and construction of the remedy.

Statement of Work

I. In order to obtain a working knowledge of the site, the Contractor is to review the following background documents:

A. Remedial Investigation Report
B. Modified Remedial Investigation Report
C. Feasibility Study Report
D. Record of Decision
E. Administrative Consent Decree

II. The contractor is to review documents as well as revisions to such documents submitted by the PRPs or the PRPs' contractor. The purpose of document review will be to provide comments to the EPA WAM regarding: i) the implentability and feasibility of the PRPs' plans for implementing the ROD; ii) consistency with the ROD; and iii) the contractor's professional judgment of the technical quality of the PRP submittal in question. The contractor is to read the description of each of the documents, which provides the Statement of Work that the PRPs are required to implement in accordance with the consent decree. The following is a list of some documents that the contractor is to review:

A. Remedial Design Work Plans and revised Work Plan if necessary

B. Predesign reports and revised reports if necessary

C. Remedial Design Reports and revised reports if necessary - the Remedial Design Reports shall include at a minimum, the following:

1) Intermediate Design Reports
2) Prefinal/Final Design Reports

- the final design submittal shall include at a minimum, the following:

a) Final plans and specifications
b) Groundwater operation and maintenance plan
c) Groundwater construction quality assurance project plan ("Groundwater (CQAPP").
d) Groundwater field operation plan
e) Final construction cost estimate
f) Schedule for implementation of all of the above.

D. Remedial Action Work Plans - The groundwater Remedial Action ("RA") work plan shall include, at a minimum the following:

1) Groundwater sampling, analysis, and monitoring plan
2) Quality Assurance/Quality Control ("Groundwater QA/QC Plans
3) Health and Safety Plan
4) Site Management Plans

5) Construction Quality Control Project Plan (Groundwater CQCPP")

E. Final reports for Remedial Construction and additional report if necessary. (Construction builds report).

F. Remedial Action Report

G. Technical memorandum for any modification determined to be appropriate.

H. Requests for modification of the approved Final Design Reports based on construction methods identified by the construction contractor(s) or other information

I. Contingency Measure Plan and revision if necessary

J. Final Report for Remedial Action or Contingency Measure and an additional report if necessary

K. Draft Operation and Maintenance Manual

Review Criteria

The Contractor is to provide technical support to the EPA WAM to effectively review the PRPs' design and construction approach for remedial action. During the Contractor's review of documents, he is to consider the following factors:

* technical requirements of the ROD and ARARs;
* currently accepted environmental protection measures and technologies;
* standard professional engineering practices;
* applicable statutes, EPA policies, directives, and regulations;
* evaluation of field data (when necessary);
* verifying that the proposed siting, containment, or structural features are appropriate and that any site constraints have been addressed;
* spot checking design calculations to assess accuracy and quality of design activities; and
* examination of planning and construction schedules for meeting project completion goals.

III. Field work will be performed by the PRPs as part of the RD/RA activities. The Contractor will provide oversight support and maintain a field logbook in which all field activities shall be recorded. The logbook shall contain at minimum the following information:

1. the date and time of field activities;
2. climatic conditions;
3. name, title and affiliation of all personnel at the site;
4. tasks where oversight is being conducted;

5. a complete description of all activities, including any approved work changes or deviations from the EPA-approved Remedial Action Plan (RAP) or any other applicable plans.

B. The logbook is to be signed by a Contractor representative at the completion of field activities and shall be labelled "ENFORCEMENT CONFIDENTIAL."

C. The Contractor will verbally notify the WAM on the same day if any deviations pursuant to A.5 above are observed in the field. Such deviations shall be noted in the field logbook, as described above. The Contractor is to submit a letter report to the EPA WAM within 7 days of verbal notification which describes each deviation and the resolution if any.

D. As part of the certification of work process, the Contractor is to be available, at EPA's request to accompany EPA on an inspection.

E. The Contractor will collect split samples of at least ten percent of the samples collected during the RD/RA process.

Meetings

I. Upon receipt of this Work Assignment, the Contractor will schedule a meeting with the EPA WAM and Project Officer to discuss this Work Assignment. The key personnel who will work on the project are to be in attendance.

II. At EPA's request, the Contractor is to attend technical meetings with EPA, the PRPs, the PRPs' contractor and the Puerto Rico Environmental Quality Board (EQB). The Contractor is to adhere to all government travel regulations (Joint Travel Regulations).

III. At the direction of the EPA WAM, the Contractor will make a site visit(s) to aid in his review of documents submitted by the PRPs.

IV. At EPA's request, the Contractor is to attend and participate in public meetings and availability sessions as well as assist the EPA WAM in the preparation of visuals for presentation purposes.

Deliverables

I. The Contractor will submit a draft workplan to the EPA WAM within 20 calendar days of receipt of this Work Assignment. The qualifications of all personnel proposed to work on the job shall be included as part of the Work Plan. The Contractor will submit a final Work Plan within 10 calendar days of receipt of EPA's comments.

II. Within 21 calendar days (or as otherwise specified by the EPA WAM) of receiving each of the documents listed in item II, above, the Contractor will submit a detailed technical review report regarding the content of the document submitted by the PRPs or the PRPs' contractor. The Contractor's review report is to follow the following general format:

A. Introduction/General Comments.

B. Specific Comments (listed by section, page and paragraph); these comments shall point out technical flaws, impracticalities or other concerns regarding design, construction or operation of the system or procedure in question.

C. Suggestions/Revisions for improving design, construction and/or operational parameters or procedures.

III. The Contractor will submit letter report(s) describing oversight findings and field activities within 7 calendar days of completion of each week's activities. This report shall also contain the pertinent pages of the logbook.

IV. The Contractor will provide minutes of each technical meeting the Contractor attends. These minutes will be provided to the EPA WAM within 7 calendar days of the date of the meeting.

Project Organization

The EPA WAM for this project is Adalberto Bosque, U.S. Environmental Protection Agency; Caribbean Field Office, 1413 Fernandez Juncos Avenue, Santurce, Puerto Rico, 00909; (809) 729-6951/6920; fax (809) 729-7746.

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